

VAYIZOF, A.; SUKHOVICH, V.; LEV, B.; ZAKORKO, N.

Norms for the number of workers. Sots. trud & no.6:113-119 Je '63.

(MIRA 16:9)

(Ukraine—Pipe mills)

LAVRUSHKO, P.; VAYNZOF, A.; BANNIK, Yu.; BUTORINA, E.; SUKHOVICH, V.

Hidden potentialities for the increase of labor productivity in
pipe workshops. Biul. nauch. inform.: trud i zar. plata 3
no. 10:3-13 '60. (MIRA 13:12)
(Ukraine--Pipe) (Labor productivity)

VAYNZOF, A.M., inzh.; BANNIK, Yu.A., inzh.; BUTORINA, E.I., inzh.

Methods of establishing industrial standards and potentialities
for an increased output in pipe drawing mills. Stal' 23 no.3:
254-259 Mr '63. (MIRA 16:5)

1. Ukrainskiy nauchno-issledovatel'skiy trubnyy institut.
(Pipe mills--Production standards)

VAYNZOF, M.

Adjusting wage funds in connection with the new bonus
system. Biul.nauch.inform.: trud i zar.plata 3
no.4:27-31 '60. (MIRA 13:8)
(Wages)

VAYNZOF, M.

On a single period for awarding bonuses to workshop and plant
administration workers. Sots.trud 7 no.4:68-70 Ap '62.
(MIRA 16:1)

1. Zamestitel' nachal'nika otdela rabochikh kadrov, truda i
zarabotnoy platy Dnepropetrovskogo soveta narodnogo khozyaystva.
(Dnepropetrovsk Province--Bonus system)

VAYNZOF, M.

Compensation for overtime in production sections which are
in continuous operation. Sots. trud 6 no.6:118-121 Je '61.
(MIRA 16:8)

1. Zamestitel' nachal'nika otdela rabochikh kadrov. truda i
zarabotnoy platy Dnepropetrovskogo soveta narodnogo
khozyaystva.

VAYNZOF, M. (Dnepropetrovsk)

On material incentives in filling customers' orders. Sots.trud
4 no.7:127-130 J1 '60. (MIRA 13'8)
(Dnepropetrovsk—Bonus system)

VAYNTRAUB, I. A., KLIMENKO, V. G., GOFMAN, YU. YA., SHUTOV, A. D. (USSR)

Isolation of Globulins from the Seeds of Certain Leguminous Plants and Determinations of their N-Terminal Amino Acids.

report presented at the 5th Int'l.
Biochemistry Congress, Moscow, 10-16 Aug. 1961

VAYNTRAMB, I. A., KLITENKO, V. G., GOFMAN, YE. YA., SUTOV A. D. (USSR)

"Isolation of Globulins from the Seeds of Certain Leguminous
Plants and Determination of their N-Terminal Amino Acids."

Report presented at the 5th Int'l. Biochemistry Congress,
Moscow, 10-16 Aug 1961.

Vayntraub, I. A.

SOV/19-58-6-78/685

AUTHORS: Sunygin, K.K., Vayntraub, I.A., and Iskol'dskiy, I.D.

TITLE: A Device for Compressing, e.g. Book Blocks (Ustroystvo dlya obzhima, naprimer, knizhnykh blokov)

PERIODICAL: Byulleten' izobreteniy, 1958, Nr 6, pp 21 - 22 (USSR)

ABSTRACT: Class 11c, 1. Nr 113720 (587360 of 4 Dec 1957). Submitted to the Committee for Inventions and Discoveries at the Ministers Council of USSR. A device designed in the form of two systems of continuously rotating horizontal rollers with an endless band running around the rollers of each system; the working branches of the bands form a gradually diminishing gap which is adjustable by screw devices mounted on a frame and changing the incline angle of the one of the roller systems.

Card 1/1

VAYNTRUB, V.K.; KHAYMOVICH, M.G.; SLUTSKIY, A.P.

Efficient design of the speed reducer and variator. Kozh.-obuv.
prom. 3 no.2:16-18 F '61. (MIPA 14:4)

(Conveying machinery)
(Shoe industry--Equipment and supplies)

VAYNZOF, M.I. (Moscow).

Labor saving i zincographic copying. Poligr. proiz. no.5:15 My '53.

(MLRA 6:6)

(Zincography)

VAYNZOF, M.I.

Photo-engraving cotton printing rollers. Tekst.prom. 14 no.10:
44-45 0 '54. (MLRA 7:10)

(Textile printing) (Cotton machinery) (Photoengraving)

VAYNZOF, M. (Dnepropetrovsk)

Method for computing a shift chart on uninterrupted operating
aggregates. Sots.trud no.3:109-115 Ag '57. (MIRA 10:9)
(Hours of labor)

VAYNZOF, M.; STUDITSKIY, S.; KATAYEV, V.

Unsolved problem. Sots.trud 4 no.2:72-76 F '59. (MIRA 12:4)

1. Otdel truda i zarplaty Dnepropetrovskogo sovnarkhoza (for Vaynzof). 2. Starshiy inzhener po planirovaniyu i trudu Teploelektro-
tsentrali No.8 Mosenergo (for Studitskiy). 3. Starshiy inzhener
ORKET i Z'a Permskogo sovnarkhoza (for Katayev).
(Overtime)

GUSAKOV, S.F., inzhener; VAYOGANT, A.S., inzhener.

Earthwork under cold weather conditions. Stroil. prom. 34 no.9:
7-10 S '56. (MLRA 9:10)

(Earthwork--Cold weather conditions) (Frozen ground)

SOURCE: AN MOISOR. Institut fiziki i matematiki. Issledovaniya po puti razvitiya.

materials). Kishinev, Gos. izd-vo Kartya Moldovenyasko, 1964, 44-56

"APPROVED FOR RELEASE: 08/31/2001

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ACCESSION NR. AT4044552

ENCLOSURE 02

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VAYPOLIN, A.A.; GASHIMZADE, F.M.; GORYUNOVA, N.A.; KESAMANLY, F.P.;
NASLEDOV, D.N.; OSMANOV, E.O.; RUD', Yu.V.

Physicochemical and electric properties of certain ternary
semiconducting compounds of the type $A^{II}B^{IV}C^V$. Izv. AN SSSR.
Ser. fiz. 28 no.6:1085-1089 Je '64. (MIRA 17:7)

1. Fiziko-tekhnicheskii institut imeni Ioffe AN SSSR.

ACC NR: AF6036786

(N)

SOURCE CODE: UR/0363/66/002/011/1966/1969

AUTHOR: Loshakova, G. V.; Plechko, R. L.; Vaypolin, A. A.; Pavlov, B. V.; Valov, Yu. V.; Goryunova, N. A.

ORG: Physicotechnical Institute im. A. F. Ioffe, AN SSSR (Fiziko-tekhnicheskiy institut AN SSSR); Kiev Pedagogic Institute (Kievskiy pedagogicheskiy institut)

TITLE: Production and some properties of the semiconductor compounds ZnSnP_2 and CdSnP_2

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 2, no. 11, 1966, 1966-1969

TOPIC TAGS: zinc containing alloy, tin containing alloy, cadmium containing alloy, phosphorus containing alloy, semiconductor alloy

ABSTRACT: Previous attempts to obtain ZnSnP_2 from a mixture of components taken in stoichiometric ratio yielded a product containing a mixture of phases, including the ternary compound ZnSnP_2 , but also zinc and tin phosphides. The present article describes a method for producing single phase ZnSnP_2 by crystallization from a dilute solution in tin. The initial weighed portion consisted of zinc, tin, and phosphorus, in which the tin was taken in large excess over the stoichiometric amount. After heating to a temperature of 870°C and slow cooling in an evacuated quartz ampoule, the

Card 1/2

UDC: 537.311.33

ACC NR: AF6036786

ZnSnP₂ was separated from the tin. The remaining thin film of tin on the ZnSnP₂ crystals was dissolved in concentrated nitric acid. The crystals of ZnSnP₂ were a dark gray color, and were 3 x 1, 5 x 0.5 mm in size. Analogous experiments with CdSnP₂ showed that it could be produced from a dilute solution in cadmium. X ray analysis of the compounds obtained made it possible to determine the type of crystal structure, the lattice constants, and the microhardness; these values are listed in tabular form. It was shown also that ZnSnP₂ has a considerable amount of chemical resistance to a number of mineral acids, including nitric, hydrochloric, sulfuric, and hydrofluoric, while CdSnP₂ has very little resistance to these acids. Orig. art. has: 1 figure and 2 tables.

SUB CODE: 11, 20/ SUBM DATE: 23Dec65/ ORIG REF: 001/ OTH REF: 002

Card 2/2

VAYKOLIN, A-A

PAGE 1 BOX 7-10111111 55/1935

Vsesoyuznoye soveshchaniye po steklobrannym sostoyaniyu. M., Leningrad, 1959.
Steklobrannoye sostoyaniye: trudy Tret'ego vsesoyuznogo nauchnoyeniya Leningrad,
16-20 noyabrya 1959 (Vitreous State: Transactions of the Third All-Union Con-
ference on the Vitreous State, held in Leningrad on November 16-20, 1959) Moscow,
Izd-vo AN SSSR, 1970. 534 p. Errata slip inserted. 3,200 copies printed.
(Series: Ita: Trudy)

Sponsoring Agencies: Institut khimii silikatov Akademi nauk SSSR. Vsesoyuznyy
khimicheskoye obshchestvo imeni D.I. Mendeleeva and Gosudarstvennyy oryena
Leningra opticheskoy Institut imeni S.I. Vavilova.

Editorial Board: A.I. Agutinsk, V.P. Barzakovskiy, M.A. Bezborodov, O.K. Kotvichin,
V.V. Vargin, A.G. Vlasov, K.S. Yevstrop'yev, A.A. Lebedev, M.A. Matveyev, V.S.
Molchanov, R.L. Myuller, R.A. Toray-Kechita, Chairman, M.A. Toropov, V.A.
Florinskaya, A.K. Yabinski; Ed. of Publishing House: I.V. Suvorov; Tech. Ed.:
V.T. Bochever.

PURPOSE: This book is intended for researchers in the science and technology of
glasses.

COVERAGE: The book contains the reports and discussions of the Third All-Union
Conference on the Vitreous State, held in Leningrad on November 16-20, 1959.
They deal with the methods and results of studying the structure of glasses, the
relation between the structure and physical properties of glasses, the nature of the
chemical bond and glass structure, and the crystallochemistry of glass. Fused
silica, mechanism of vitrification, optical properties and glass structure, and
the electrical properties of glasses are also discussed. A number of the re-
ports deal with the dependence of glass properties on composition, the timing of
glasses and radiation effects, and mechanical, technical, and chemical prop-
ties of glasses. Other papers presented by more than 300 delegates from Soviet and
East German scientific organizations. Among the participants in the discussions
were M.V. Solov'ev, Ye. N. Korovin, G.P. Mikhaylov, S.M. Petrov, V.P. Pryamishnikov, Yu. Ya.
Gottlib, O.P. Mondulov, Ye. Korovin, G.P. Mikhaylov, A.Ye. Kuznetsov, E.V. Medvedev, G.V.
Levin, A.V. Shatilov, K.T. Plokhinskiy, A.Ye. Kuznetsov, E.V. Medvedev, G.V.
Pyurgenovskaya, A.A. Mal'tsev, R.S. Shevelich, Z.G. Pinzer, and O.S. Molodtsova.
Kuznetsov, V.P. Podman, R.S. Shevelich, Z.G. Pinzer, and O.S. Molodtsova.
The final session of the Conference was addressed by Professor I.I. Kityagorskiy,
Honored Scientist and Engineer, Doctor of Technical Sciences. The following
institutions were cited for their contribution to the development of glass science
and technology: Gosudarstvennyy opticheskoy Institut (State Optical Institute),
Institut khimii silikatov AN SSSR (Institute of Silicate Chemistry, AN USSR),
Fizicheskoy Institut AN SSSR (Physics Institute AN USSR), Fiziko-tekhnicheskoy
Institut AN SSSR (Physicochemical Institute AN USSR), Institut fiziki AN SSSR,
Minsk (Institute of Physics, Academy of Sciences, Belorusskaya SSR, Minsk),
Laboratory of Physical Chemistry of Silicates of the Institute of Chemistry, Inorgani-
cheskoy khimii AN SSSR, Minsk (Institute of General and Inorganic Chemistry,
Academy of Sciences, Belorusskaya SSR, Minsk), Institut vysokomolekulyarnykh
soyedineniy AN SSSR (Institute of High Molecular Compounds, AN USSR), Gosudarstven-
nyy Institut stekla (State Institute for Glass Fibers), Gosudarstvennyy Institut steklo-
lovolona (State Institute for Glass Fibers), Gosudarstvennyy Institut elektrotekh-
nicheskoy fiziki (State Institute for Electrical Glass), Sibirskiy fiziko-
tekhnicheskoy Institut, Tomsk (Siberian Physicochemical Institute, Tomsk), Leningrad-
skiy gosudarstvennyy universitet (Leningrad State University), Moskovskiy khimicheskoy
tekhnicheskoy Institut (Moscow Institute of Chemical Technology), Leningradskiy
tekhnicheskoy Institut in Leningrad (Leningrad Technological Institute, Leningrad),
Belorusskiy politekhnicheskoy Institut Minsk (Belorussian Polytechnic
Institute, Minsk), Nevskiy politekhnicheskoy Institut (Novosibirsk
Polytechnic Institute), and Sverdlovskiy politekhnicheskoy Institut (Sverdlovsk
Polytechnic Institute). The Conference was sponsored by the Institute of Silicate
Chemistry AN USSR (acting Director - A.S. Gottlib), the Vsesoyuznoye khimicheskoye
obshchestvo imeni D.I. Mendeleeva (All-Union Chemical Society imeni D.I. Men-
deleyev), and the Gosudarstvennyy oryena Leningra opticheskoy Institut imeni
S.I. Vavilova (State Optical Institute imeni S.I. Vavilov).
The 15 resolutions of the Conference include recommendations to organize a new
Center for the purpose of coordinating the research on glass, to establish a new
periodical on glass, and to join the International Committee on Glass. (Physicochemical
Glasses) and to join the International Committee on Glass. (Physicochemical Glasses)
Attended by A.A. Toray-Kechita, Professor, and Chairman of the Scientific Conference of Chem-
ical Sciences, and R.L. Myuller, Doctor of Physics and Mathematics, Member of the
Organizational Committee, and R.A. Toray-Kechita, Doctor of Chemical Sciences, Member
of the Organizational Committee. The editorial board consists of G.M. Butskaya,
M.V. Vol'kondiyev, I.I. Dekhina, R.P. Poyshin, S.N. Dubrov, V.A. Luff, and
B.T. Kolodiyev. References accompany individual reports.

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ACCESSION NR: APh039667

S/0181/64/006/006/1769/1772

AUTHORS: Dembovskiy, S. A.; Vaypolin, A. A.

TITLE: Properties of crystals of As_2Se_3

SOURCE: Fizika tverdogo tela, v. 6, no. 6, 1964, 1769-1772

TOPIC TAGS: arsenic selenide, differential thermal analysis, unit cell, growth rate

ABSTRACT: To study the mechanism of body crystallization of glassy As_2Se_3 in the temperature interval of softening, the authors measured the crystallization rate at 240 and 3300 by differential thermal analysis. They found a reciprocal dependence of crystallization rate on viscosity. The parameters of the unit cell for single crystals obtained by growth from the gaseous phase were found to be: $a = 12.053 \pm 0.001 \text{ \AA}$, $b = 9.890 \pm 0.001 \text{ \AA}$, $c = 4.277 \pm 0.001 \text{ \AA}$, $\beta = 90^\circ 28' \pm 3'$; the space group is $P2_1/n$. As_2Se_3 is isomorphous with As_2S_3 . The width of the forbidden band in glassy As_2Se_3 is $1.8 \pm 0.05 \text{ eV}$; in single crystals and polycrystalline material it is $2.1 \pm 0.05 \text{ eV}$. The density of glassy As_2Se_3 is 4.68 g/cm^3 , of crystalline material 4.80 g/cm^3 . Orig. art. has: 1 figure and 2 tables.

Card 1/2

ACCESSION NR: AP4039667

ASSOCIATION: Institut obshchey i neorganicheskoy khimii im. N. S. Kurnakova AN
SSSR, Moscow (Institute of General and Inorganic Chemistry AN SSSR); Fiziko-
tekhnicheskiiy institut im. A. F. Ioffe AN SSSR, Leningrad (Physicotechnical
Institute AN SSSR)

SUBMITTED: 07Jan64

ENCL: 00

SUB CODE: SS, EC

NO REF SOV: 010

OTHER: 003

Card 2/2

TITLE: Solid solutions in amorphous polymers
ANALYSIS: amorphous polymers Issledovaniya po temam: "Amorfnye polimeri"

Circle 4

L 12651-65

ACCESSION NR: AT4044564

2

ASSOCIATION: Institut fiziki i matematiki AN Mol SSR (Institute of Physics and Mathematics, AN Mol. SSR)

SUBMITTED: 1965-11-11

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Card 4/4

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APPROVED FOR RELEASE: 08/31/2001

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DEMBOVSKIY, S.A.; VAYPOLIN, A.A.

Properties of As_2Se_3 crystals. Fiz. tver. tela 6:1749-
1772. 1964. (MIRA 17:9)

1. Institut obshchey i neorganicheskoy khimii imeni Kurnakova
AN SSSR, Moskva i Fiziko-tekhnicheskii institut imeni Ioffe AN
SSSR, Leningrad.

S/0048/64/028/006/1085/1089

ACCESSION NR: AP4041383

AUTHOR: Vaypolin, A.A.; Gashimzade, F.M.; Goryunova, N.A.; Kesamanly*, F.P.; Osmanov, E.O.; Rud', Yu.V., Nasledov, D. N. (Doctor of physico-mathematical sciences)

TITLE: Investigation of the physical-chemical and electric properties of crystals of some ternary semiconductor compounds of the $Al^{III}B^{IV}C^{V}_2$ type /Report, Third Conference on Semiconductor Compounds held in Kishinev 16 to 21 Sep 1963/

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v.28, no.6, 1964, 1085-1089

TOPIC TAGS: semiconductor, electric conductivity, Hall effect, crystal structure, cadmium compound, zinc compound, carrier mobility

ABSTRACT: Single crystals of the following semiconductors were obtained and their properties were investigated: $CdGeAs_2$, $ZnSiAs_2$, $CdSiP_2$, $ZnSnAs_2$ and $ZnSiP_2$. The method of synthesis is not described. X-ray diffraction showed the specimens to be single crystals with the chalcopyrite structure. The crystallography of these materials is discussed briefly, and the lattice parameters, density, hardness and melting point are tabulated. Both p-type and n-type crystals of $CdGeAs_2$ were obtained. Only p-type conductivity was found in the other two arsenides, and only n-type in

Card 1/3

ACCESSION NR: AP4041383

ZnSiP₂. Results of conductivity and Hall coefficient measurements over the temperature range from 90 to 600°K are presented graphically for an n-type CdGeAs₂ crystal, a p-type CdGeAs₂ crystal, and several ZnSnAs₂ crystals with different but unspecified impurity contents. The Hall coefficient of the n-type CdGeAs₂ was independent of temperature, and the conductivity increased with increasing temperature above about 150°K. The concentration of conduction electrons was approximately 10^{17} cm^{-3} and their mobility was $10^3 \text{ cm}^2/\text{Vsec}$. With the aid of thermoelectric measurements, the effective mass was estimated to be 0.027 electron masses. The Hall coefficient of the p-type CdGeAs₂ decreased rapidly with increasing temperature above 200°K and changed sign at 520°K. Neither the conductivity nor the Hall coefficient of the Zn-SnAs₂ crystals varied greatly with temperature. The Hall coefficient exhibited a maximum at about 200°K which became less pronounced and shifted toward higher temperatures with increasing impurity content. This is ascribed to conduction in the impurity band. The band structure of the materials is discussed. The effective masses of the carriers in the conduction band and the V₂ and V₃ valence bands were calculated, and these and the gap energy are tabulated. All these quantities increased with decreasing molecular weight. The energy gap ranged from 0.53 to 2.5 eV, and the effective masses from 0.020 to 0.096, 0.035 to 0.19, and 0.12 to 0.49 electron masses for the C, V₂ and V₃ bands, respectively. Orig.art.has: 1 formula, 6

Card 2/3

ACCESSION NR: AP4041383

figures and 2 tables.

ASSOCIATION: Fiziko-tekhnicheskiy institut im.A.F.Ioffe Akademii nauk SSSR (Physi-
co-technical Institute, Academy of Sciences, SSSR)

SUBMITTED: 00

ENCL: 00

SUB CODE: SS,IC

NR REF SOV: 007

OTHER: 006

Card 3/3

ACCESSION NR: AP4016508

S/0020/64/154/005/1116/1119

AUTHORS: Vaypolin, A.A.; Goryunova, N.A.; Osmanov, E.O.; Rud' Yu. V.; Tret'yakov, D.N.

TITLE: Investigating ZnSiP_2 , CdSiP_2 , and ZnSiAs_2 crystals

SOURCE: AN SSSR. Doklady*, v. 154, no. 5, 1964, 1116-1119

TOPIC TAGS: high melting compound, forbidden zone, chalcopyrite, Debye crystallogram, right prism, phosphide crystal, xray diffraction, lattice spacing, electronic mobility, anisotropy

ABSTRACT: The lack of information on the ZnSiP_2 , CdSiP_2 and ZnSiAs_2 crystals prompted an investigation into their structure by the use of x-ray and electric measurements. The phosphide crystals are transparent and vary in color ranging from ruby color for the ZnSiP_2 to light red for the CdSiP_2 . The anisotropy of the internal

Card 1/3

ACCESSION NR: AP4016508

structure of these crystals is projected to their external appearance; the phosphide crystals are divided into hexahedral, pentahedral and trihedral, according to their lateral faces. They are resistant to a variety of acids and alkalis. Optical measurements have made it possible to determine the width of the forbidden zone of the crystals under consideration. These ZnSiP_2 and CdSiP_2 parameters have thus been defined for the first time. The width of the ZnSiAs_2 forbidden zone was found to be less than 2.1 ev. The microhardness of the phosphides is somewhat greater than that of their binary analogues, and their width is larger than that of the forbidden zone of the same order. As for the arsenides, their microhardness is of the same order as that of their binary analogues, and their forbidden zone is narrower. "The authors are grateful to B.P. Zakharchene and G.A. Sikharulidze for their assistance in determining the width of the forbidden zone. In conclusion, the authors express their gratitude to F.M. Gashimzade for a discussion of the results." Orig. art. has: 3 figures and 2 tables.

Card 2/3

ACCESSION NR: APh016508

ASSOCIATION: Institut fiziki Akademii nauk AzSSR (Institute of Physics AzSSR);
Fiziko-tekhnicheskiy institut im. A. F. Ioffe Akademii nauk SSSR (Physico-
technical Institute, Academy of Sciences SSSR)

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OTHER: 005

Card 3/3

Physico-chemical properties and structure of monocrystalline samples of ZnSiAs_2 . A. A. Vaypolin, N. A. Goryunova, E. O. Osmanov.

Investigation of macrocrystalline ZnSiP_2 . N. A. Goryunova, A. A. Vaypolin, Yu. V. Rud'.

Some properties and zone structure of the ternary compound CdGeAs_2 . F. M. Gashimzade, N. A. Goryunova, E. O. Osmanov.

Electrical properties of monocrystalline samples of ZnSnAs_2 . N. A. Goryunova, F. P. Kesamanly, D. N. Nasledov, Yu. V. Rud'.

Investigation of properties of ZnGeP_2 and CdGeP_2 . N. A. Goryunova, N. K. Takhtareva, I. I. Tychina.

On the question of the existence of homogeneous many-component tetrahedral phases. G. K. Aberkiyeva, A. A. Vaynolin, N. A. Goryunova.

X-Ray investigation of certain compounds of the type $\text{A}^{\text{II}}\text{B}^{\text{IV}}\text{C}_2^{\text{VI}}$. A. A. Vaynolin, E. O. Osmanov, Yu. V. Rud', I. I. Tychina, A. F. Lindin, N. A. Goryunova, A. F. Iyevin'sh.

Report presented at the 3rd National Conference on Semiconductor Compounds, Kishinev, 16-21 Sept 1963

6

Semiconducting phases in the system $A_3^{II}B_2^{VI}-A^{II}B^{VI}$ (? - Sic.).
L. V. Kradinova, I. K. Polushina.

Anomalous scattering of x-rays in Ga_2Se_3 and its solid solutions.
A. A. Vaynolin and M. M. Markus.
(Presented by A. A. Vaynolin--25 minutes).

Papers not presented.]

Diffusion of impurities in gallium arsenide. B. I. Boltaks, V. I. Sokolov,
F. S. Shishiyanu.

Influence of the impurities silver and gold on the electrical properties
of gallium arsenide. B. I. Boltaks, V. I. Sokolov, F. S. Shishiyanu.

Report presented at the 3rd National Conference on Semiconductor Compounds,
Kishinev, 16-21 Sept 1963

VAYPOLIN, A. A.; PORAY-KOSHITS, Ye. A.

Structure of glassy arsenic chalcogenides; corrections to the
radial distribution curves. Fiz. tver. tela 5 no.1:246-255
Ja '63. (MIRA 16:1)

1. Institut khimii silikatov AN SSSR, Leningrad.

(Arsenic chalcogenides) (X rays—Scattering)

VAYPOLIN, A. A.; PORAY-KOSHITS, Ye. A.

Structure of glassy arsenic chalcogenides; glassy and crystalline states in the system $\text{As}_2\text{Se}_3 - \text{As}_2\text{Te}_3$. Fiz. tver. tela 5 no.1: 256-262 Ja '63. (MIRA 16:1)

1. Institut khimii silikatov AN SSSR, Leningrad.

(Arsenic chalcogenides)

VAYPOLIN, A.A.; PORAY-KOSHITS, Ye.A.

Structure models of glasses and structures of crystalline
chalcogenides. Fiz. tver. tela 5 no.2:683-687 F '63.
(MIRA 16:5)

1. Institut khimii silikatov imeni I.V.Grebenshchikova AN SSSR,
Leningrad.
(X-ray crystallography) (Chalcogenides)

VAYPOLIN, A. A.

15(0), 15(2)

AUTHOR:

Kolomiyets, B. T.,
Doctor of Technical Sciences

SOV/30-59-2-45/60

TITLE:

The Investigation of Vitreous Semi-Conductors
(Izucheniye stekloobraznykh poluprovodnikov)

PERIODICAL:

Vestnik Akademii nauk SSSR, 1959, Nr 2, pp 103-104 (USSR)

ABSTRACT:

From December 1 to 2, 1958 a conference took place on this problem at the Fiziko-tekhnicheskiy institut Akademii nauk SSSR (Physicotechnical Institute of the Academy of Sciences, USSR). It dealt with the discussion of the experiments carried out, mutual information on the course of experiments and their general coordination. Representatives from 11 scientific institutions attended the conference. The following lectures were heard: V. V. Tarasov, Moskovskiy khimiko-tekhnologicheskii institut (Moscow Chemicotechnological Institute) spoke of experimental results connected with the investigation of heat capacity at low temperatures of As_2S_3 and As_2Se_3 . His second report dealt with the polymeric concept of glass formation and semiconductors in general.

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R. L. Myuller, Gosudarstvennyy opticheskiy institut

The Investigation of Vitreous Semi-Conductors

SOV/30-59-2-45/60

(State Optical Institute) emphasized the decisive role played by the covalent bond in glass formation.

A. A. Vaypolin, Institut khimii silikatov Akademii nauk SSSR (Institute of Silicate Chemistry of the AS USSR) described the investigation of the structure of the system $As_2Se_3-As_2Te_3$ by X-ray methods.

L. I. Tatarinova, Institut kristallografii Akademii nauk SSSR (Crystallographical Institute of the AS USSR) reported on the structural investigation of some chalcogenids by electron-diffraction.

A. I. Gubanov and V. Ye. Khartsiyev, Fiziko-tekhnicheskiy Institut (Physicotechnical Institute) reported on theoretical problems of the semiconductor properties of glass types.

V. P. Shilo discussed working results in the determination of boundaries in glass formation in the As_2S_3 and As_2Se_3 systems.

N. A. Goryunova compared the boundaries of vitreous state in these systems with the criteria of glass formation obtained by Zakhariassen and Vinter-Kleyn and found that there exists no correlation between them.

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The Investigation of Vitreous Semi-Conductors

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T. F. Nazarova investigated the electric properties of semiconductor glass types in the $\text{TeSe} - \text{As}_2\text{Se}_3$ system.

B. T. Kolomiyets spoke of research work in the field of inner photoelectric effect done by T. N. Mamontova.

B. V. Pavlov discussed experimental results of the position of the absorption boundary as dependent on the change of composition of glass types.

V. P. Pozdnev reported on material he obtained in the investigation of the viscosity of glass types in the $\text{As}_2\text{Se}_3 - \text{As}_2\text{Te}_3$ system.

B. T. Kolomiyets summarized the working results obtained by the Physicotechnical Institute and found that in the materials investigated the short-range order is not changed in the transition from the vitreous into the crystalline state.

O. V. Mazurin, Leningradskiy khimiko-tekhnologicheskii institut (Leningrad Chemicotechnical Institute) described the investigation of the semiconductor properties of silicate and borosilicate glass types with the addition of iron-cobalt and titanium oxides.

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The Investigation of Vitreous Semi-Conductors

SOV/30-59-2-45/60

N. V. Petrovykh, Moskovskiy institut elektrotekhnicheskogo stekla (Moscow Institute of Electrotechnical Glass) outlined the investigation results of the boundaries of glass formation and the electric properties of contiguous semiconductor glass types of the composition $V_2O_5 - P_2O_5 - R_xO_y$ (R- elements of the I, II, III, IV and V groups of the periodic system). The next conference on semi-conductor glass types will probably be held in 1959.

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S/181/63/005/002/047/051
B102/B186

AUTHORS: Vaypolin, A. A., and Poray-Koshits, Ye. A.

TITLE: Structure models of glasses and the structures of crystalline chalcogenides

PERIODICAL: Fizika tverdogo tela, v. 5, no. 2, 1963, 683 - 687

TEXT: The results of X-ray analyses of vitreous and crystalline arsenic chalcogenides are used to determine the effects of composition on structure. The following is found: When light atoms in glass are replaced by heavier ones packing becomes more compact and more symmetric than would follow from the changes in physical properties. In studies of the radial distribution curves it was found that the composition-induced changes in structure occur nonmonotonically. In polycrystalline samples of the system $\text{As}_2\text{Se}_3\text{-As}_2\text{Te}_3$ there exists a certain region with two crystalline modifications and a non-monotonic change in structure of the low-temperature phase is observed; it is attributed to a nonmonotonic change in bond character. The increase in ionic bonds that occurs in vitreous or crystalline phases on approaching to the middle between the initial binary compositions is explained by

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S/181/63/005/002/047/051
B102/B186

Structure models of glasses ...

effects of the ionic and covalent bond length ratios. Changes in bond character give rise to nonmonotonic and anomalous changes in other properties, but the most important physical properties are not sensitive to these nonmonotonies. Approximate and general information on the atomic arrangement in vitreous chalcogenides can be obtained by the method of isomorphous substitution; for crystals the results are more exact. Glasses and high-temperature modifications of chalcogenides consist of corrugated atomic layers displaying nonmonotonic deformation when the composition is changed. As a result of this deformation an increase of coordination numbers occurs with a tendency to octahedral formations. More detailed information on the vitreous structures could be gained from intensity curves of scattered radiation and "gas scattering" experiments. There are 3 figures. ✓

ASSOCIATION: Institut khimii silikatov im. I. V. Grebenshchikova AN SSSR,
Leningrad (Institute of Silicate Chemistry imeni I. V.
Grebenshchikov AS USSR, Leningrad)

SUBMITTED: October 9, 1962

Card 2/2

VAYPOLIN, A.A.; GORYUNOVA, N.A.; OSMANOV, E.O.; RUD', Yu.V.; TRET'YAKOV, D.N.

Study of ZnSiP, CdSiP, and ZnSiAs crystals. Dokl. AN SSSR
154 no.5:1116-1119 F'64. (MIRA 17:2)

1. Institut fiziki AN AzSSR i Fiziko-tekhnicheskii institut
im. A.F. Ioffe AN SSSR. Predstavleno akademikom B.P.
Konstantinovym.

S/181/63/005/001/040/064
B108/B180

AUTHORS: Vaypolin, A. A., and Poray-Koshits, Ye. A.

TITLE: Structure of vitreous arsenic chalcogenides. Vitreous and crystalline states in the system $\text{As}_2\text{Se}_3\text{-As}_2\text{Te}_3$

PERIODICAL: Fizika tverdogo tela, v. 5, no. 1, 1963, 256 - 262

TEXT: The powder patterns of $\text{As}_2\text{Se}_3\text{-As}_2\text{Te}_3$ samples show that the structure changes gradually with the composition. There are two crystalline modifications around $\text{As}_2\text{Se}_3\text{-As}_2\text{Te}_3$. For crystalline As_2Se_3 and the high-temperature $\text{As}_2\text{Se}_3\text{-As}_2\text{Te}_3$ modification the radial distribution curves calculated from the scattered-intensity curves are very similar to those of the corresponding glasses. The curve for the low-temperature modification, which has higher symmetry, differs both in position and in the height of its peaks. The structure of the low-temperature modification is a very close packing of Se^{-2} and Te^{-2} ions with two thirds of the octahedral sites occupied by arsenic ions. Crystalline As_2Se_3 belongs to the space group

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Structure of vitreous...

S/181/63/005/001/040/064
B108/B180

$P2_1$ with eight molecules in one elementary cell ($a = 9.900$, $b = 12.080$, $c = 8.576 \text{ \AA}$); its structure is shown in the figure. Glasses of the system As_2Se_3 - As_2Te_3 crystallize on heating and the crystallization rate rises with Te content. The low-temperature modification crystallizes at $130 - 150^\circ\text{C}$ after several hours. The high-temperature modification crystallizes at 200°C in a few minutes with texturization. Several physical properties do not change with structure. There is 1 figure.

ASSOCIATION: Institut khimii silikatov AN SSSR, Leningrad (Institute of Silicate Chemistry AS USSR, Leningrad)

SUBMITTED: August 7, 1962

Card 2/3

S/181/63/005/001/039/064
B108/B180

AUTHORS: Vaypolin, A. A., and Poray-Koshits, Ye. A.

TITLE: Structure of vitreous arsenic chalcogenides. Corrections to the radial distribution curves

PERIODICAL: Fizika tverdogo tela, v. 5, no. 1, 1963, 246 - 255

TEXT: In an earlier study (FTT, 2, 7, 1656, 1960) experimental X-ray scattering curves were taken for a series of glasses of the system arsenic sulfide-selenide-telluride. Here the radial distribution curves are improved in order to gain more information on structural variations of these glasses with composition. The most probable of several intensity curves was taken for each glass to calculate the radial distribution curves of the electron density. To improve these the distribution of the atom-electron density was also calculated. The variation in interatomic spacing with composition is not linear and that in coordination numbers is only slight, and not monotonic. The former, however, is not due to diffraction error. Corrections are introduced for the dispersion of the K electrons, in the form of scale factors in the radial distribution curves. These corrections leave the interatomic spacing unchanged and slightly reduce the coordination

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Structure of vitreous...

S/181/63/005/001/039/064
B100/B100

numbers. As the interatomic distances are about equal to the sum of the ionic radii of the corresponding elements the radial distribution curves can be improved without having to compute a Fourier integral. These improved curves can be used to improve the values of the coordination numbers by taking account of the contribution of ionic bonds in the two- or three-component glasses. A general model is proposed for all vitreous arsenic chalcogenides assuming the S, Se, or Te atoms to be in layers with the As atoms between. The latter are responsible for the increased first coordination number. There are 8 figures and 3 tables.

ASSOCIATION: Institut khimii silikatov AN SSSR, Leningrad (Institute of Silicate Chemistry AS USSR, Leningrad)

SUBMITTED: August 7, 1962

Card 2/2

VAYPOLIN, A.A.; PORAY-KOSHITS, Ye.A.

Structure of vitreous arsenic chalcogenides. Fiz.tver.tela 2
no.7:1656-1665 J1 '60. (MIRA 13:8)

1. Institut khimii silikatov AN SSSR, Leningrad.
(Chalcogenides)

S/081/62/000/011/007/057
E111/E152

AUTHORS: Goryunova, N.A., Vaypolin, A.A., and Chiang-ping-hsi
TITLE: Solubility of germanium in some ternary compounds
with a tetrahedral structure

PERIODICAL: Referativnyy zhurnal, Khimiya, no.11, 1962, 51.
abstract 11 B 292. (In the Symposium: 'Fizika i
khimiya' ('Physics and Chemistry'), L., 1961, 26-29)

TEXT: Using the X-ray structural method the solution of Ge
in CuGe_2P_3 (I), which has a tetrahedral arrangement of atoms, was
studied. It was shown that in I the most probable disordered
arrangement of atoms of Cu and Ge is in positions similar to those
of the metal in the sphalerite structure, and of P atoms in
positions of the non-metal in the same structure. When solid
solutions were formed in alloys of the homogeneous range from the
composition of I to that of the alloy with the composition
70 mol % I the X-ray patterns showed one system of sharp lines
corresponding to the structure of ZnS . The period of identity
varied from a 5.38 kX for I to 5.48 kX for the alloy with the
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Solubility of germanium in some ... 5/081/62/000/011/007/057
E111/E152

limiting concentration. When Ge dissolves in I its atoms
occupy both "cationic" and "anionic" positions.

[Abstractor's note: Complete translation.]

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84987

S/181/60/002/007/046/047/XL
B006/B067

15.2120

AUTHORS: Vaypolin, A. A., Poray-Koshits, Ye. A.

TITLE: The Structure of Vitreous Arsenic Chalcogenides

PERIODICAL: Fizika tverdogo tela, 1960, Vol. 2, No. 7, pp. 1656-1665

TEXT: The authors thoroughly describe X-ray studies of vitreous arsenic sulfides, -selenides, and -tellurides, and some three-component compounds. They succeeded in determining a rule governing the structural changes with changing composition: With increasing atomic number of one of the elements of the VI group of the periodic system introduced in the glass, or with increasing concentration of the heavy atoms in glass, the compactness and the symmetry of the structure increase. A study of the various structural variants showed that the structure of As_2S_3 in the form of chains lying closely together, bands or layers with a minimum "thickness", and a tridimensional structure of the remaining compounds are most probable. The following glasses were studied: As_2S_3 , $(2/3)As_2S_3 \cdot (1/3)As_2Se_3$, $(1/3)As_2S_3 \cdot (2/3)As_2Se_3$, As_2Se_3 , $(3/4)As_2S_3 \cdot (1/4)As_2Te_3$, $(1/4)As_2S_3 \cdot (3/4)As_2Te_3$.

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The Structure of Vitreous Arsenic
Chalcogenides

S/181/60/002/007/046/047/XX
B006/B067

(1/2)As₂Se₃, (1/2)As₂Te₃, (1/4)As₂Se₃, (3/4)As₂Te₃, As₂Te₃, and
(3/4)As₂Te₃, (1/4)As₂S₃. The samples were made available by the laboratory
of Professor B. T. Kolomiets. The results of investigations are
illustrated in numerous diagrams. Numerical results are given in a table;
besides the first and second interatomic distances (r_I , r_{II}), this table
contains the coordination numbers and the areas below the first and
second maximum of the radial distribution curves for the electron density.
The calculation of the coordination numbers showed that also in vitreous
As₂S₃ each arsenic atom is surrounded by three sulfur atoms, and that
each sulfur atom lies between two arsenic atoms. The densely packed
chain- or layer structure of As₂S₃ is illustrated in Figs. 9 and 10.
According to the experimental results, it appears to be most probable.
As₂Se₃, As₂Te₃, and the three-component glasses (Figs. 3-6) have spatial
structures. Fig. 8 shows the functions of the radial electron density
distributions from which the coordination numbers were calculated.

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The Structure of Vitreous Arsenic
Chalcogenides

S/181/60/002/007/046/047/XX
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Composition of the glass	$r_I [A]$	$r_{II} [A]$	Coordination numbers	
			As	S, Se, Te
As_2S_3	2.31	3.52	3.0	2.0
As_2Se_3	2.44	3.66	3.5	2.4
$0.75 As_2Se_3 \cdot 0.25 As_2Te_3$	2.50	3.72	3.5	2.3
$0.5 As_2Se_3 \cdot 0.5 As_2Te_3$	2.66	3.86	3.0	2.0
$0.25 As_2Se_3 \cdot 0.75 As_2Te_3$	2.64	3.36	3.2	2.1
As_2Te_3	2.76	3.88	3.9	2.6

Academician A. F. Ioffe is mentioned. There are 10 figures, 1 table, and 12 references: 8 Soviet, 1 US, 1 British, and 2 German. ✓

ASSOCIATION: Institut khimii silikatov AN SSSR Leningrad (Institute of Silicate Chemistry of the AS USSR, Leningrad)

SUBMITTED: December 16, 1959

Card 3/3

L 34122-66 EWT(m)/T/EWP(t)/ETI LJP(c) RDN/ID/JO

ACC NR: AR6017261

SOURCE CODE: UR/0059/65/000/012/EO47/EO47

AUTHOR: Goryunova, N. A.; Averkiyeva, G. K.; Vaypolin, A. A. 52
B

TITLE: Possibility of obtaining single crystals of multicomponent alloys

SOURCE: Ref. zh. Fizika, Abs. 12E362 16

REF SOURCE: Sb. Fizika. Dokl. k XXIII Nauchn. konferentsii Leningr. inzh.-stroit. in-ta. L., 1965, 52-53

TOPIC TAGS: single crystal growth, crystal lattice structure, alloy system, annealing, zone melting

ABSTRACT: The authors investigated the possibility of obtaining homogeneous quintuple alloys based on GaAs and the ternary compound Cu_2GeSe_3 . In the synthesis of the samples, starting only with the composition 60% (3GaAs) - 40% Cu_2GeSe_3 , the Debyeograms show one system of lines, corresponding to the ZnS structure. The lattice periods of the alloys approximately obey Vegard's law. However, no complete homogeneity of the samples could be attained: the x ray patterns showed lines of the second phase. By zone melting there was attained an ingot in which a considerable section had a single-phase structure. Single crystals with composition 80% (3GaAs) - 20% Cu_2GeSe_3 , with size 3 x 2 x 2 mm, were obtained by the transport-reaction method (using I_2 as the transporter). A. Rabin'kin. [Translation of abstract]

SUB CODE: 20

Card 1/1 *pla*

ACC NR: AP7008519

SOURCE CODE: UR/0363/67/003/002/0260/0266

AUTHOR: Vaypolin, A. A.; Osmanov, E. O.; Tret'yakov, D. N.

ORG: Physicotechnical Institute im. A. F. Ioffe, Academy of Sciences, SSSR (Fiziko-tekhnicheskii institut Akademii nauk SSSR)

TITLE: Some aspects of the chemistry of type $A^{II}B^{IV}C^V_2$ diamondlike compounds

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 3, no. 2, 1967, 260-266

TOPIC TAGS: semiconductor crystal, zinc compound, cadmium compound, beryllium compound, phosphide, arsenide, nitride, germanium compound, tin compound, silicon compound

ABSTRACT: Difficulties in the synthesis of certain semiconducting compounds of type $A^{II}B^{IV}C^V_2$ and the variety and special features of their properties led to the following directions of research in this area: study of the synthesis and crystallization of the compounds in general and in metallic solutions in particular, elucidation of the stability criteria for multicomponent compounds, conditions of phase transformations, study of the width of the region of homogeneity, and behavior of impurities in complex semiconducting phases. The following compounds were thus investigated: $ZnSiP_2$, $ZnGeP_2$, $CdSiP_2$, $AsSiAs_2$, $CdGeP_2$, $ZnGeAs_2$, $ZnSnAs_2$, $CdGeAs_2$ and $CdSnAs_2$. It is shown that they can be divided into three groups: (1) compounds with a very narrow region of homogeneity ($CdSnAs_2$, $ZnSnAs_2$, $ZnSiAs_2$). When they are synthesized with certain components in excess over the stoichiometric amounts, the excess components form a separate phase,

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UDC: 537.31.33

ACC NR: AP7008519

and a careful determination of the unit cell parameters does not show any changes of the cell constants; nor is there any change in conductivity type. (2) Compounds in which the size and shape of the unit cell change moderately with changing composition (CdGeAs_2 , CdGeP_2). In CdGeAs_2 crystals the conductivity type changes with the composition. (3) Compounds capable of dissolving a relatively large amount (~20 mole %) of a group IV element (ZnGeAs_2 , ZnGeP_2 , ZnSiP_2), this being associated with a structural transition. It is concluded that $\text{A}^{\text{III}}\text{B}^{\text{IV}}\text{C}^{\text{V}}_2$ compounds can find the same applications as semiconductors of types $\text{A}^{\text{III}}\text{B}^{\text{V}}$ and A^{IV} . Orig. art. has: 5 figures and 5 tables.

SUB CODE: 07,20/ SUBM DATE: 27Jan66/ ORIG REF: 012/ OTH REF: 005

Card 2/2

VAYPOLIN, A.F.; MISNIK, Yu.M.; SHKLYAROV, M.I.

Mechanized hole boring in exploration mining. Zap. Len. gor. inst.
34 no.1:69-72 '57. (MLBA 10+9)
(Boring machinery) (Prospecting)

BAKINOV, G.P.; BOKIY, B.V.; BOKIY, O.B.; BORISOV, A.A.; BORISOV, D.F.;
~~VAYPOLIN, A.F.~~; GALAYEV, N.Z.; GOLOVIN, G.M.; GORODEFSKIY, P.I.;
DUBRAVA, T.S.; ZOLOTAREV, N.D.; KAZAKOVSKIY, D.A.; KELL', L.N.;
KOMAROV, V.B.; MAKHO, Ye.Ya.; MISNIK, Yu.M.; MUSTAL', P.I.;
PISKUNOV, I.N.; SEMEVSKIY, V.N.; KHANUKAYEV, A.N.; SHABLYGIN, A.I.;
POPOV, V.M.

Aleksandr Mikhailovich Aliamskii; an obituary. Gor. zhur. no.2:
76-77 '58. (MIRA 11:3)

(Aliamskii, Aleksandr Mikhailovich, d. 1957)

VAYPOLINA, Ye.A.

Excitability fluctuations in the Human visual analyzor. Uch.
zap. IGU no.239:135-145 '58. (MIRA 12:1)

1.Laboratoriya fiziologii analizatorov Fiziologicheskogo instituta
Leningradskogo gosudarstvennogo universiteta.
(VISION)

VAYPOLINA, Ye.A.

Biophysics of the excitability fluctuation of human visual and
auditory analysors. Trudy Len. ob-va est. 72 no.1:125-128 '61.
(MIRA 15:3)

(VISION) (HEARING)

VAYPUTSKIY, V.

Working together in the collective. Sov.profsoiuzy 5 no.6:70-71
Je '57. (MIRA 10:7)

1. Predsedatel' tsekhovogo komiteta Mamakanskoy Teplovoy elektricheskoy
stantsii "Lenzoloto."
(Works councils)

VAYRADYAN, A.S.

An approach to the choice of optimum capacity of the memory of a
specialized computer for use in automatic control. Vych. tekhn.
no.3:16-36 '62. (MIRA 15:6)
(Electronic calculating machines) (Automatic control)

VAYRADYAN, A. S.

95

S/089/62/013/006/019/027
B102/B186

AUTHORS: G. T. and M. R.

TITLE: Nauchnaya konferentsiya Moskovskogo inzhenerno-fizicheskogo
instituta (Scientific Conference of the Moscow Engineering
Physics Institute) 1962

PERIODICAL: Atomnaya energiya, v. 13, no. 6, 1962, 603 - 606

TEXT: The annual conference took place in May 1962 with more than 400 delegates participating. A review is given of these lectures that are assumed to be of interest for the readers of Atomnaya energiya. They are following: A. I. Leypunskiy, future of fast reactors; A. A. Vasil'yev, design of accelerators for superhigh energies; I. Ya. Pomeranchuk, analyticity, unitarity, and asymptotic behavior of strong interactions at high energies; A. B. Migdal, phenomenological theory for the many-body problem; Yu. D. Fivyskiy, deceleration of medium-energy antiprotons in matter; Yu. M. Kogan, Ya. A. Iosilevskiy, theory of the Mössbauer effect; M. I. Ryazanov, theory of ionisation losses in nonhomogeneous medium; Yu. B. Ivanov, A. A. Rukhadse, h-f conductivity of subcritical plasma;

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18

8/089/62/013/006/019/027
B102/B186

Nauchnaya konferentsiya...

B. V. Pletnev, P. M. Spevakov, A. M. Stolov, supply of synchrotron electro-
magnets; G. L. Saksaganskiy, V. Ya. Moiseyev, flanged separable heat-re-
sistant junctions of great diameter; B. G. Klimov, A. S. Vayradyan,
V. F. Yevseyev, I. B. Mikhaylov, I. M. Afonskiy, B. M. Belov, Ye. I. Mam-
nov, B. I. Strelkov, Ye. V. Sedykh, B. A. Shchukin, optical principles in
computer engineering technique; R. S. Makhmanson, M. M. Roysin,
M. E. Mostovlyanskiy, Yu. A. Volkov, electronics; Ye. L. Sulim, transmitter
for electromagnetic flow-meter, V. M. Oveyankin, V. M. Plushnikov, applica-
tion of varicondes for transforming d.c. into a.c.

Card 4/4

S/745/62/000/003/002/004

AUTHOR: Vaynadyan, A. S.

TITLE: An approach to the choice of optimal memory capacity for a special-purpose computer for automatic control

SOURCE: Moscow. Inzhenerno-fizicheskiy institut. Vychislitel'naya tekhnika. no. 3. 1962. 16 - 36.

TEXT: A queuing problem is solved for the case when a computer services n identical objects that call for computer service at random. The length of the queue determines the volume of the operative memory needed for the computer. The problem is solved for two cases, $n \leq 2$ and $n > 2$. The former case is shown to be of no significance. In the latter case, particularly for $n \gg 1$, assuming the service time to have an exponential distribution (which is admittedly a crude approximation), the author determines the probability that an inquiry received at a time t will be processed by the time $t + \theta$, and also the probability that an inquiry still not handled at the time t_0 will be handled by the time $t_0 + t$. The problem is formulated mathematically and solved numerically with an analog computer, for several parameter combinations. It is found that

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An approach to the choice ...

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under certain conditions the number of memory cells can be made equal to the number of inquiries within a given time interval. V. D. Chaloy helped with the solution of the mathematical problem and Ya. I. Khetagurov offered valuable advice. Reference is made to a paper on the subject by G. Luchak (Operations Research, v. 4, 711, 1956). There are 5 figures and 4 tables.

Card 2/2

VAYS, A., inzh.

Planning and accounting for a motortruck fleet. Avt. transp.
42 no.8:34-36 Ag '64. (MIRA 17:10)

1. Direktor 20-y avtobazy Upravleniya po tsentralizovannym
perevozkam stroitel'nykh грузов Glavmosavtotransa.

VAYS, A.

Example of a devotion to the service of the people. Avt. transp.
41 no.9:4-5 S '63. (MIRA 16:10)

1. Direktor 20-y avtobazy Mosstroytransa.

VAYS, A.

Perfect organization of work secures a high labor productivity.
Avt. transp. 41 no.8:5-8 Ag '63. (MIRA 16:11)

1. Direktor 20-y avtomobil'noy bazy Mosstroytransa.

DAVIDENKO, S.A.; VAYS, A.L.; NIKOLENKO, V.F.; KALASHNIKOV, I.F.;
KOROLEV, V.K.; SHILOV-TSEVA, L.M., redaktor; MAL'KOVA, N.V.,
tekhnicheskiy redaktor.

[Assembly-line secondary servicing of automobiles] Vtoroe
tekhnicheskoe obsluzhivanie avtomobilia na potoke. Moskva,
nauchno-tekhn.izd-vo avtotransp. lit-ry, 1954. 31 p.(MLRA 8:11)
(Automobiles--Repairing)

VAYS, A.

DAVIDENKOV, S.; VAYS, A.; KALASHNIKOV, I.; KOROLEV, V.; NIKOLENKO, V.

Second servicing of ZIS automobile trucks on an assembly
line. Avt.transp. 32 no.9:16-20 S '54. (MLRA 7:11)
(Motor trucks--Maintenance)

VAYS, A.

DAVIDENKOV, S.; VAYS, A.

Dump trailer. Avt.transp. 32 no.11:10-11 N '54. (MLRA 8:3)
(Dump trucks--Trailers)

DAVIDENKOV, S.; VAYS, A.

Experience in using side-wall and dump truck trains. Avt.
transp. 33 no.5:16-18 My '55. (MIRA 8:8)

(Motor trucks--Trailers) (Dump trucks)

Vays, A.

KONEV, B.; SHUKHOV, O.; YAMASHKIN, N.; VAYS, A.

Improving the operation of K-80 carburetors. Avt.transp.33 no.7:
17-19 J1'55. (MIRA 8:12)

(Automobiles--Engines--Carburetors)

VAYS, Anatoliy L'vovich, NIKOLENKO, Viktor Filippovich; KOROLEV, Vasil'y
Kuz'mich; KALASHNIKOV, Ivan Fedorovich; KISELEVA, V.A., redaktor;
GALAKTIONOVA, Ye.N., tekhnicheskii redaktor

[Dump trucks with dump trailers; the practices of the 5th truck
depot of the Chief Moscow Automobile Transportation Administration]
Samosval'nye avtopoezda; iz opyta 5-i avtobazy Glavmosavtotransa.
Moskva, Nauchno-tekhn. izd-vo avtotransp. lit-ry, 1956. 53 p.
(Truck trailers) (MLRA 10:3)
(Dump trucks)

VAYS, A. glavnyy inzhener avtobaz.

Piece work and bonus wage system for repair and service workers.

Avt. transp. 34 no.12:25 D '56.

(MLRA 10:2)

(Automobiles--Repairing) (Wages)

VAYS, Kh.G.; KALINA, O.S. (Odessa)

Association of coarctation of the aorta with an aneurysm
of the cerebral artery. Vrach. delo no.10:137-138 0 '63.
(MIRA 17:2)

1. Pervaya gorodskaya infektsionnaya bol'nitsa Odessy i
klinika infektsionnykh bolezney (zav. - prof. L.K.
Korovitskiy) Odesskogo meditsinskogo instituta.

VAYS, Kh.G. (Odessa)

Diencephalic lesion in toxoplasmosis. Vrach. delo no.7:144-145
Jl '63. (MIRA 16:10)

1. Klinika infektsionnykh bolezney (zav. - prof. L.K.Korovitskiy)
meditsinskogo instituta i 1-ya gorodskaya infektsionnaya bol'-
nitsa.

(DIENCEPHALON--DISEASES)~ (TOXOPLASMOSIS)

VAYS, KHORST

Category : USSR/General Problems - Problems of Teaching

A-3

Abs Jour : Ref Zhur - Fizika, No 3, 1957, No 5523

Author : Vays, Khorst

Title : The Teaching of Physics in the German Democratic Republic

Orig Pub : Fizika, v shkolo, 1956, No 5, 44-50

Abstract : No abstract

Card : 1/1

VAYS, Khorst. Cand Ped Sci

(Diss) "Methods of Conducting Laboratory Work in Electricity in the
Secondary-School 10th Class Course in Physics Under Conditions of Achieving a
Polytechnic Education." Mos, 1957. 12 pp 21 Cm. (Mos State Pedagogical
Inst im V.I.Lenin), 140 Copies (KL, 27-57, 111)

Vaysa, K. F.

USSR/Analytical Chemistry - Analysis of Inorganic Substances

G-2

Abs Jour : Ref Zhur - Khimiya, No 4, 1957, 12059

Author : Born G.I., Vaysa K.F., Kobaladze M.G.

Inst : Commission on Analytical Chemistry of the Academy of Sciences
USSR

Title : On Resolution of Some Analytical Problems Pertaining to Rare
Earths by Means of Radioactivation Analysis

Orig Pub : Tr. Komis. po analit. khimii AN SSSR, 1956, 7(10), 104-118

Abstract : Considered is the possibility of determining some rare earth elements by the method of radioactivation analysis, and it is shown that by simple auxiliary means it is possible to carry out their determination with sufficient accuracy in a number of mixtures. To measure the activity of the irradiated preparations use was made of beryllium-radium (500 mg Ra) a source of neutrons and a unit of B type with an aluminum B-1 counter tube. Described is the procedure of determining Eu in samarium, Dy in yttrium earths free from Gd, and in those containing Gd, of determining Sm in cerium earths free from Eu, and determination of Gd in yttrium earths low in Eu.

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VAYS, Kh. G.; SAL'NIKOV, M. N. (Odessa)

Errors in the diagnosis of sporadic cases of hemorrhagic encephalitis. Klin. med. 40 no.7:113-114 J1 '62. (MIRA 15:7)

1. Iz 1-y Odesskoy infektsionnoy bol'nitsy (glavnyy vrach L. T. Zhidovlenko)

(ENCEPHALITIS) (HEMORRHAGIC DISEASES)

← VAYS, Karl Leonovich; VLASOV, Ye.M., red.; SHILLING, V.A., red. izd-
va; GVIRTIS, V.L., tekhn. red.

[Problems in applying microreproduction to scientific and
technological information] Nekotorye voprosy primeneniia mik-
rofotokopirovaniia v nauchno-tekhnicheskoi informatsii. Le-
ningrad, 1962. 14 p. (MIRA 15:12)
(Microphotography)

VAYS, K.L.

VERSHILOVA, N.A.; VAYS, K.L.

Problems of technical information in other countries. *Mnergomashino-*
stroenie 3 no.10:45-48 0 '57. (MIRA 10:12)
(Technology--Information services)

BLEK, Aleksey Vladimirovich; VAYS, Karl Leonovich; AVERBAKH, A.D., red.;
GRIGOR'YEVA, I.S., red.izd-va; GVITS, V.L., tekhn.red.

[Organization of information on foreign science and technology]
Organizatsiia informatsii o zarubezhnoi nauke i tekhnike.
Leningrad, 1961. 32 p. (MIRA 15:5)
(Technology—Information services)

CA

7

~~Indirect determination of ammonia in the presence of methyl amines.~~ *Osvold Vals. Chem. Ind. 37, 283-6*

(1943).—To det. NH_3 in $(\text{NH}_4)_2\text{SO}_4$ add 50 ml. satd. HgCl_2 soln. to 10 ml. 10% NaOH in a 250-ml. volumetric flask, dil. with some H_2O , stir, and add 25 ml. of the sample. After 10 min. shaking fill to the mark and filter. In 100 ml. of filtrate det. Cl by titration with $\text{Hg}(\text{NO}_3)_2$ soln. (cf. Votoček, *C.A.* 32, 1820¹). Milos Hudlicky

7

CA

Determination of acetic anhydride. (Devaki Vaid.
Chem. Lett. 18, 15-17 (1944).) Ac₂O was hydrolyzed with
0.5 N NaOH at 100° and the HAcO destd. by titrating the
excess NaOH. The AcOH originally present was titrated
after the reaction of Ac₂O with benzidine to C₆H₅NO₂,
(1:1) at 0°. The results were somewhat better than that
of the usual aniline method. (see Hudlicky.)

CA

10

Bromination of aromatic compounds. Oswald, Van
Chem. Listy 38, 231-2(1914). Bromination of aromatic
with Br in aq. solus. requires 0.8 g. Br and 0.2 g. KBrO₃
for each H substituted. If KBr is used, 0.06 mole KBr
and 0.33 mole KBrO₃ are required. Br₂C₆H₄OH and the
Ba salt of dibromosulfanilic acid were thus prepd.
Milos Hudlicky

VAIS₂ Oswald

✓ The analytical control of sodium hydroxide production.
Oswald Vaig. Chem. Průmysl 6, 7-8 (1958). The applica-
tion of Andrews' method of titrimetric detn. of sulfates in
the presence of a large excess of NaCl was tested, and a
procedure was worked out for detg. sulfates in the brine in
2 modifications: directly in the whole weighed-out sample
and in an aliquot part after diln. The 2nd modification is
preferred as a plant-control method. For the estn. of ClO₂-
in the brine a colorimetric procedure is suggested.

L. A. Helwich

Rm

2

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1045, 1454,

23427

S/121/60/000/008/014/014/KX
D040/D113

AUTHORS: Geller, Yu.A., and Vays, S.D.

TITLE: The effect of the composition of quenching media on the hardenability and strength of carbon steel

PERIODICAL: Stanki i instrument, no. 8, 1960, 27-29

TEXT: Experiments were conducted to find the effect of quenching in aqueous solutions of salts and alkalis on the hardenability and strength of carbon steel and also to find the solution which brings out the best properties of the steel. Aqueous solutions of 10% NaOH, 10% Na₂CO₃, 5% KMnO₄ and 5-6% NaCl were used as quenching media. For experimental purposes, ⁴Y12A (U12A) steel with initial structure of grainy pearlite with uniformly distributed secondary cementite was used. The hardenability was determined on cylindrical specimens, 24 mm in diameter and 75 mm long. They were preheated to 600°C and then heated to 800 and 820°C in molten salt (72% BaCl₂ and 28% NaCl). The temperature of all the quenching fluids was 18-20°C. The thickness of the hardened layer was measured by three methods: (a) by hardness

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